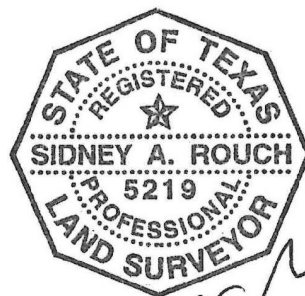


September 11, 2023

**REPORT OF BINATIONAL JOINT SURVEY
OF AUGUST 30, 2023, OF THE
BUOYS INSTALLED
WITHIN THE RIO GRANDE
NEAR EAGLE PASS/PIEDRAS NEGRAS**

Maverick County, Texas



INTERNATIONAL BOUNDARY & WATER COMMISSION

United States Section

El Paso, Texas



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APPENDIX B: BINATIONAL JOINT SURVEY DATA



1.0 INTRODUCTION AND BACKGROUND

The State of Texas installed a buoy barrier in the Eagle Pass/Piedras Negras reach of the Rio Grande in early July (**Exhibit 1, Exhibit 2**). The location of the buoys is approximately 2 miles (3.2 kilometers) downstream of the Camino Real International Bridge, in the vicinity of 28° 40' 21" N, 100° 30' 14" W. The State of Texas installed the buoy barrier in this area for the purported purpose of deterring the passage of migrants who cross the border at this location in large numbers by swimming/walking across the river. The four-foot diameter buoys are anchored to the ground by concrete blocks. They also have webbing below them that prevents people from swimming under the buoys.

The U.S. Section of the International Boundary and Water Commission (USIBWC) was not consulted by the State of Texas regarding the analysis required to ensure that there was no encroachment by the project elements into the territory of Mexico.

2.0 PREVIOUS SURVEYS OF THE BUOY BARRIER

On July 20, 2023, personnel from the Mexican Section of the International Boundary and Water Commission (MXIBWC) conducted a topographic survey using the Global Positioning System (GPS) to determine the coordinates of the installed buoys to compare the installed buoy barrier alignment with that of the International Boundary Line (IBL) between the United States and Mexico. GPS measurements were made on fifty-three (53) points on the side of the buoy facing Mexico. The IBL alignment used for the comparison was the one agreed by the Commission through Minute 315. The U.S. Section of the International Boundary and Water Commission (USIBWC) received a copy of the Mexican Section report documenting their survey and findings on July 25, 2023.

The Mexican Section's survey report stated that the total length of the floating buoys is 1,001 feet (305 meters). Of this, the length located in Mexico is 768 feet (234 meters) and the length located in the United States is 233 feet (71 meters). The report also noted that approximately eighteen (18) concrete anchor blocks were on the Mexican side.

Following the receipt of the survey data and report, the USIBWC and Mexican Sections of the IBWC coordinated a joint binational topographic survey on July 27 and 28, 2023. The survey horizontal datum used was the North American Datum of 1983 (NAD 1983), U.S. State Plane Coordinate System Texas South Central Zone, U.S. Survey feet. The survey vertical datum was the North American Vertical Datum of 1988 (NAVD 88). The survey was conducted using GPS to determine the northing and easting coordinates based on the U.S. State Plane Coordinate System Texas South Central Zone. The west face or Mexico-facing side of the buoys was surveyed. Approximately every fifth buoy was surveyed. The location of the concrete anchor blocks was also surveyed.

The joint survey indicated that the total length of the buoy system was found to be approximately 995 feet (303 meters). Based on the agreed upon IBL in Minute 315, as



demarcated by the Geographic Information System (GIS) shapefile, the survey data indicated approximately 208 feet (63 meters) of the buoys in the upstream portion of the buoy alignment are located inside the United States. The remaining approximately 787 feet (240 meters) of the buoys in the downstream portion of the buoy alignment cross over the IBL and are located in Mexico. The joint survey and results are documented in USIBWC (2023).

3.0 RELOCATION OF BUOY BARRIER

Following the results from the two surveys described above, the State of Texas relocated the buoy barrier by moving the alignment towards the United States during the week of August 21, 2023.

The Mexican Section conducted another survey on August 23, 2023, to verify if this new buoy alignment encroaches into the territory of Mexico. The survey used a horizontal datum of World Geodetic System (WGS) 1984 Universal Transverse Mercator (UTM) Zone 14 N coordinate system. Results of the Mexican Section survey showed that the realigned buoys are now entirely within the U.S. side of the IBL (**Exhibit 3**).

4.0 PURPOSE OF THE BINATIONAL JOINT SURVEY

The USIBWC conducted a second joint binational survey on August 30, 2023 to verify the findings of the Mexican Section survey report of August 23, 2023, and determine if the buoy barrier realigned by the State of Texas during the week of August 21, 2023 continued to encroach into the territory of Mexico.

5.0 BINATIONAL JOINT SURVEY

The USIBWC coordinated with the Mexican Section to have the joint binational survey conducted on August 30, 2023, with the Mexican Section staff also in attendance.

The U. S. Section surveyed the realigned location of the buoys and anchors installed by the State of Texas.

The survey horizontal datum used was the North American Datum of 1983 (NAD 1983), U.S. State Plane Coordinate System Texas South Central Zone, U.S. Survey feet. The survey vertical datum was the North American Vertical Datum of 1988 (NAVD 88).

The survey was conducted using the RTx Trimble GPS to determine the northing and easting coordinates based on the U.S. State Plane Coordinate System Texas South Central Zone. The survey began at the north end of the buoy system and continued downstream to the south end of the buoy system. The west face or Mexico-facing side of the buoys was surveyed. The west and east concrete anchors were then surveyed. The river's depth was notably deeper towards the



south end of the realigned buoys and the survey team encountered a swift current during the survey.

6.0 RESULTS

The survey data indicated that the realigned buoy alignment is located entirely on the U.S. side of the IBL (**Exhibit 4**). The results of the binational joint survey are consistent with the findings of the Mexican Section survey of August 23, 2023.

7.0 CONCLUSIONS

The State of Texas realigned the buoy barrier in the Eagle Pass/Piedras Negras reach of the Rio Grande during the week of August 21, 2023, by moving the buoys closer to the United States. Following this, the Mexican Section of the IBWC conducted a survey on August 23, 2023, and determined that the new alignment is entirely on the U.S. side of the IBL. A binational joint survey of the IBWC was conducted on August 30, 2023, and verified that the realigned buoys are on the U.S. side of the IBL, consistent with the results of the Mexican Section survey of August 23, 2023.



8.0 REFERENCES

1. Topographic Survey Performed by the Mexican Section of the IBWC to Determine the UTM Coordinates of the Floating Buoys Installed Within the Rio Grande in the Area of Eagle Pass, TX-Piedras Negras, Coah., International Boundary and Water Commission, Mexican Section, English Translation, July 2023.
 2. Minute 315 link
<https://www.ibwc.gov/minutes/>
 3. USIBWC Requirements for Work
<https://www.ibwc.gov/resources-info/#requirements>
 4. USIBWC, Report of Topographic Survey of July 27-28, 2023 of the Buoys Installed Within the Rio Grande Near Eagle Pass/Piedras Negras, Maverick County, Texas, August 25, 2023.
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APPENDIX A

EXHIBITS



Exhibit 1: Location Map

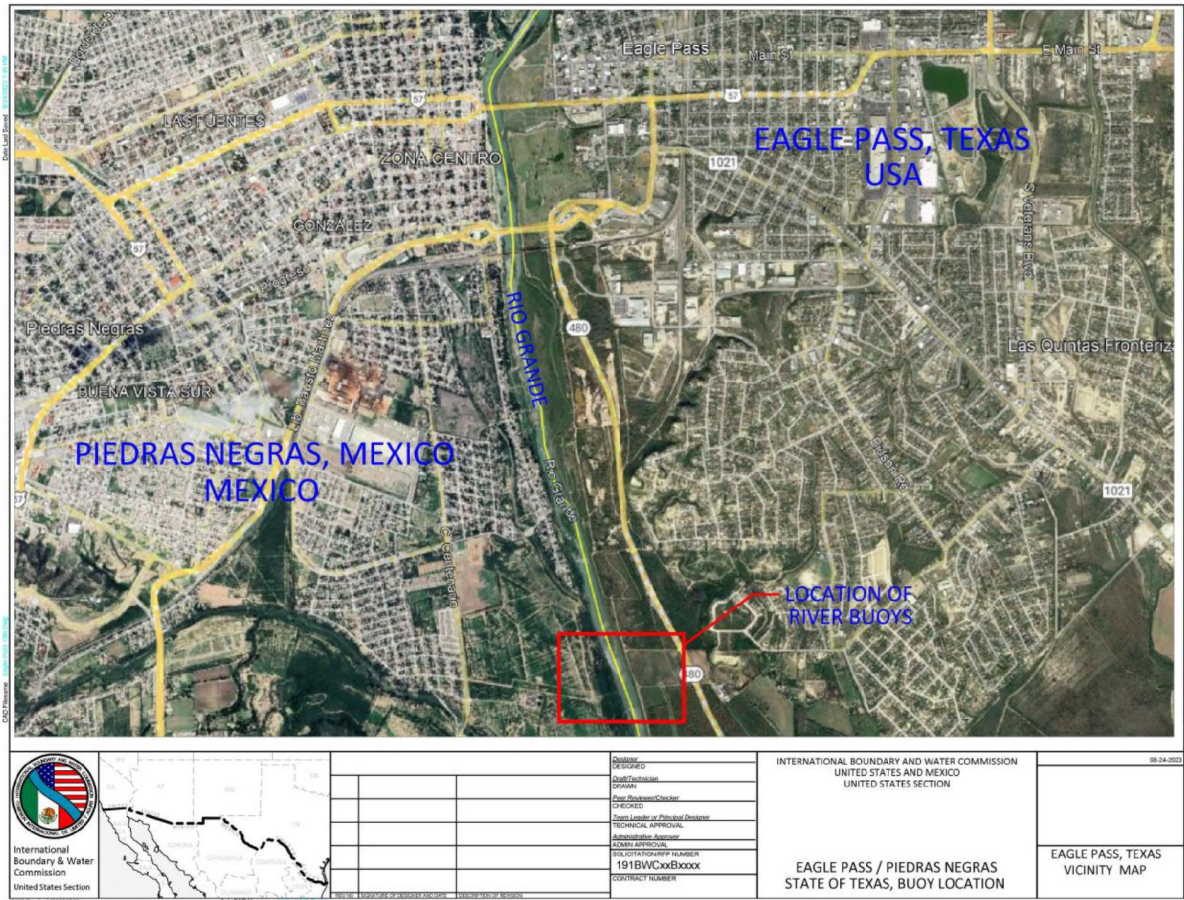


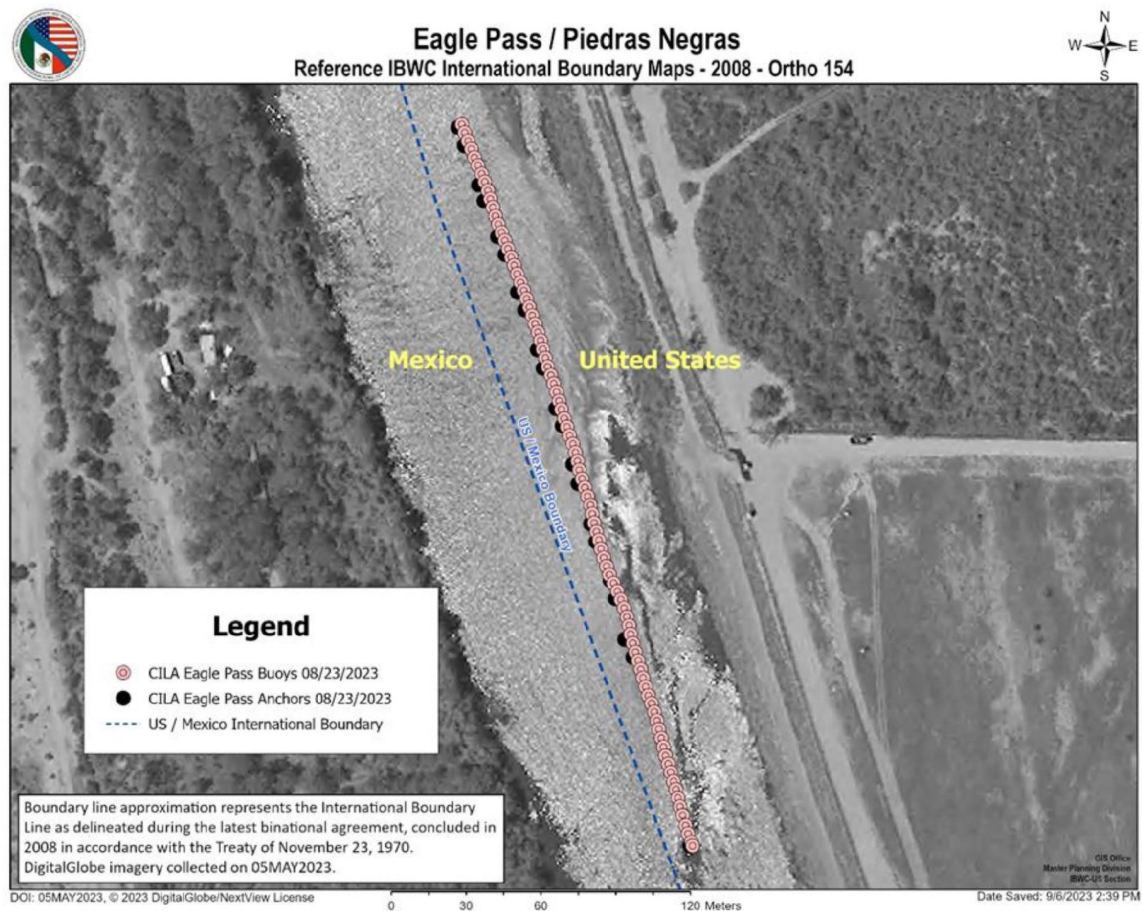


Exhibit 2: View of the Eagle Pass Buoys



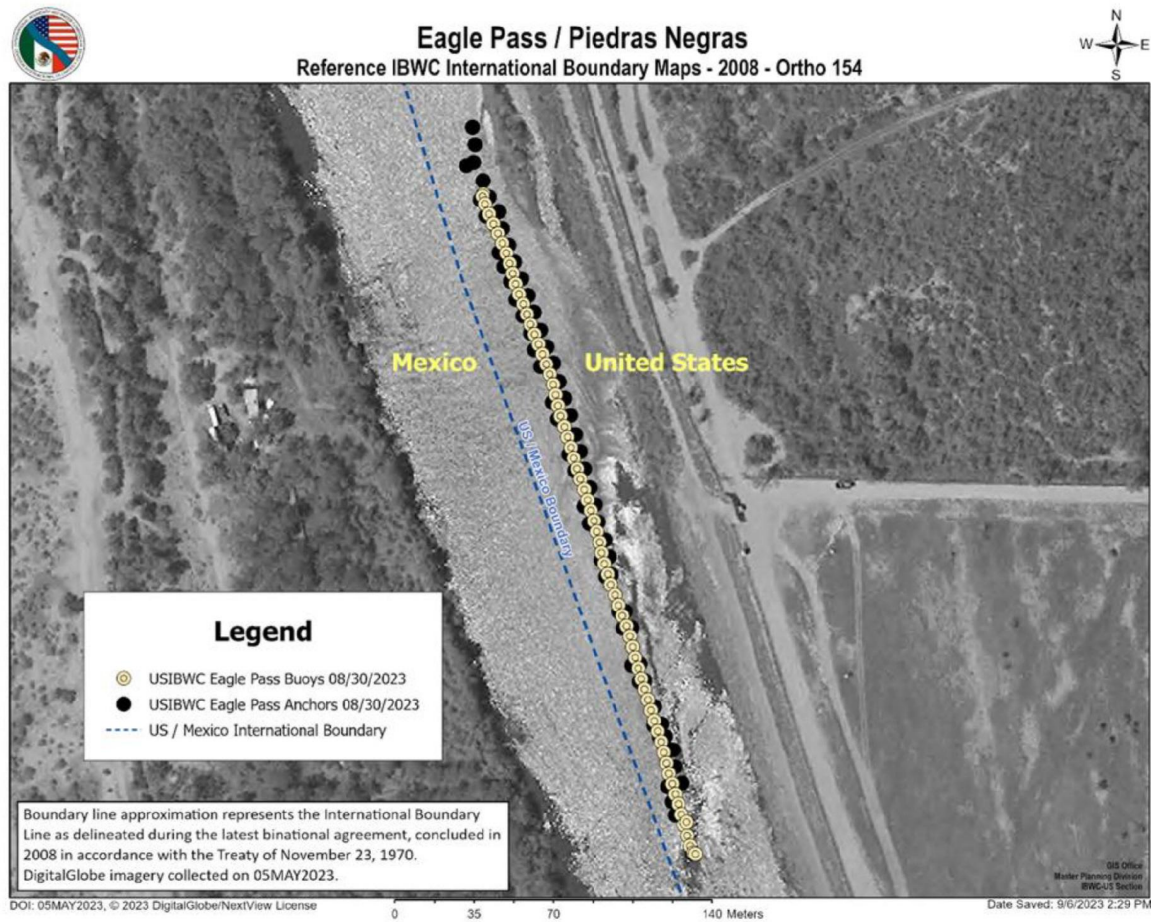


**Exhibit 3: Survey Data Plot of the IBL and Eagle Pass Buoys
(Mexican Section Survey of August 23, 2023)**





**Exhibit 4: Survey Data Plot of the IBL and Eagle Pass Buoys
(IBWC Binational Joint Survey of August 30, 2023)**





APPENDIX B

BINATIONAL JOINT SURVEY DATA

Coordinates Based on U.S. State Plane Coordinate System Texas South Central Zone

Abbreviations:

BUOY CL = Buoy Centerline at the end points

**Survey Data of Aug 30, 2023 of the Eagle Pass Buoys**

Survey Point	Northing (feet)	Easting (feet)	Elevation (NAVD 88) (feet)	Remarks
3000	13431474.02	1486554.886	689.851	chk in opus
3001	13431620.05	1486349.942	675.049	BUOY CL
3002	13431616.9	1486348.865	675.053	Buoy
3003	13431605.73	1486352.355	675.295	Buoy
3004	13431591.23	1486358.367	675.483	Buoy
3005	13431577.17	1486364.504	675.375	Buoy
3006	13431562.95	1486371.185	675.62	Buoy
3007	13431548.84	1486377.57	675.831	Buoy
3008	13431534.51	1486383.393	675.668	Buoy
3009	13431519.95	1486388.172	676.024	Buoy
3010	13431505.09	1486392.613	676.05	Buoy
3011	13431489.98	1486396.776	675.819	Buoy
3012	13431475.27	1486401.627	675.616	Buoy
3013	13431460.71	1486407.843	675.534	Buoy
3014	13431446.21	1486413.19	675.552	Buoy
3015	13431431.52	1486418.194	675.545	Buoy
3016	13431416.93	1486424.095	675.989	Buoy
3017	13431402.63	1486429.925	675.738	Buoy
3018	13431388.23	1486435.564	675.549	Buoy
3019	13431373.76	1486441.159	675.815	Buoy
3020	13431359.27	1486446.325	675.616	Buoy
3021	13431344.31	1486451.22	675.417	Buoy
3022	13431329.51	1486454.788	675.589	Buoy
3023	13431313.95	1486458.156	676.322	Buoy
3024	13431298.75	1486461.816	676.132	Buoy
3025	13431283.31	1486467.292	675.791	Buoy
3026	13431268.17	1486471.978	676.194	Buoy
3027	13431253.15	1486476.987	676.325	Buoy
3028	13431237.6	1486480.858	676.05	Buoy
3029	13431222.5	1486486.016	675.728	Buoy
3030	13431207.36	1486490.674	676.2	Buoy
3031	13431192.4	1486496.254	676.719	Buoy
3032	13431177.21	1486501.055	675.593	Buoy
3033	13431161.87	1486505.621	675.45	Buoy
3034	13431146.93	1486510.392	675.773	Buoy
3035	13431131.5	1486514.309	675.627	Buoy
3036	13431115.93	1486518.517	675.848	Buoy
3037	13431100.64	1486521.288	675.545	Buoy
3038	13431084.88	1486525.137	676.117	Buoy
3039	13431069.72	1486530.277	676.204	Buoy
3040	13431054.76	1486534.247	675.986	Buoy
3041	13431039.74	1486540.864	675.552	Buoy
3042	13431024.68	1486545.67	675.52	Buoy
3043	13431009.57	1486551.197	675.498	Buoy

**Survey Data of Aug 30, 2023 of the Eagle Pass Buoys**

Survey Point	Northing (feet)	Easting (feet)	Elevation (NAVD 88) (feet)	Remarks
3044	13430994.84	1486557.371	675.045	Buoy
3045	13430979.87	1486562.214	675.074	Buoy
3046	13430964.48	1486566.205	674.924	Buoy
3047	13430948.88	1486569.901	674.67	Buoy
3048	13430933.48	1486574.407	674.522	Buoy
3049	13430918.21	1486578.715	674.616	Buoy
3050	13430903.18	1486583.457	673.943	Buoy
3051	13430887.96	1486588.501	674.101	Buoy
3052	13430872.75	1486592.691	673.552	Buoy
3053	13430857.38	1486597.56	672.93	Buoy
3054	13430842.32	1486602.588	673.362	Buoy
3200	13430834.14	1486604.528	674.812	Anchor
3055	13430827.02	1486607.538	673.874	Buoy
3056	13430811.67	1486611.307	673.67	Buoy
3057	13430796.41	1486615.311	674.162	Buoy
3058	13430781.01	1486618.712	673.657	Buoy
3059	13430766.39	1486623.704	673.795	Buoy
3060	13430751.19	1486628.108	673.405	Buoy
3061	13430737.01	1486632.602	673.389	Buoy
3062	13430721.89	1486636.612	673.186	Buoy
3063	13430706.99	1486640.445	673.672	Buoy
3064	13430691.33	1486645.389	673.329	Buoy
3065	13430676.42	1486649.641	673.139	Buoy
3201	13430665.22	1486653.18	674.252	Anchor
3202	13430666.12	1486654.677	673.66	Buoy
3203	13430664.7	1486657.098	674.348	BUOY CL
3204	13430710.86	1486644.267	676.687	BUOY CL
3205	13430834.89	1486613.67	674.33	Anchor
3206	13430791.23	1486627.265	673.449	Anchor
3207	13430833.85	1486613.188	674.383	Anchor
3208	13430852.62	1486608.428	674.459	Anchor
3209	13430877.91	1486597.867	674.867	Anchor
3211	13430939.88	1486577.02	675.781	Anchor
3212	13430992.07	1486565.014	676.279	Anchor
3213	13431015.7	1486555.463	676.586	Anchor
3214	13431069.4	1486535.447	676.89	Anchor
3215	13431094.91	1486532.317	676.932	Anchor
3216	13431119.72	1486526.093	677.151	Anchor
3217	13431145.05	1486516.203	677.014	Anchor
3218	13431170.39	1486511.919	677.018	Anchor
3219	13431194.79	1486504.719	677.269	Anchor
3220	13431222.47	1486496.915	677.175	Anchor
3221	13431247.34	1486490.384	677.171	Anchor
3222	13431271.87	1486483.53	677.265	Anchor

**Survey Data of Aug 30, 2023 of the Eagle Pass Buoys**

Survey Point	Northing (feet)	Easting (feet)	Elevation (NAVD 88) (feet)	Remarks
3223	13431300.01	1486476.196	677.119	Anchor
3224	13431324.3	1486467.851	676.961	Anchor
3225	13431348.41	1486459.372	677.094	Anchor
3226	13431375.24	1486451.697	677.145	Anchor
3227	13431398.91	1486442.487	677.251	Anchor
3228	13431422.77	1486433.021	677.191	Anchor
3229	13431449.23	1486423.33	677.203	Anchor
3230	13431473.43	1486415.144	677.353	Anchor
3231	13431497.3	1486405.885	677.402	Anchor
3232	13431521.93	1486395.376	677.296	Anchor
3233	13431546.2	1486386.939	677.013	Anchor
3234	13431570.25	1486377.985	677.307	Anchor
3235	13431594.63	1486372.739	676.586	Anchor
3236	13431615.48	1486358.418	676.763	Anchor
3237	13431639.32	1486349.814	676.517	Anchor
3238	13431665.96	1486335.882	676.218	Anchor
3239	13431691.61	1486338.035	676.486	Anchor
3240	13431716.91	1486334.178	676.506	Anchor
3241	13431661.34	1486325.264	675.765	Anchor
3242	13431611.8	1486345.374	676.499	Anchor
3243	13431588.31	1486354.039	676.762	Anchor
3244	13431535.59	1486372.853	677.13	Anchor
3245	13431515.07	1486379.623	677.268	Anchor
3246	13431493.47	1486389.557	676.776	Anchor
3247	13431467.23	1486397.508	677.148	Anchor
3248	13431443.68	1486407.278	677.173	Anchor
3249	13431418.56	1486418.343	676.814	Anchor
3250	13431394.65	1486423.918	677.123	Anchor
3251	13431370.72	1486432.658	677.178	Anchor
3252	13431318.69	1486449.904	677.059	Anchor
3253	13431294.65	1486457.476	677.142	Anchor
3254	13431243.07	1486473.598	677.265	Anchor
3255	13431219.43	1486482.116	677.239	Anchor
3256	13431167.71	1486496.509	677.076	Anchor
3257	13431142.9	1486503.865	677.144	Anchor
3258	13431090.13	1486520.223	677.018	Anchor
3259	13431065.91	1486527.008	677.057	Anchor
3260	13431015.71	1486545.81	676.635	Anchor
3261	13430991.49	1486552.469	676.627	Anchor
3262	13430937.77	1486564.844	676.137	Anchor
3263	13430914.3	1486575.183	676.266	Anchor
3264	13430915.72	1486583.91	675.574	Anchor
3265	13430850.7	1486596.648	674.922	Anchor
3266	13430762.18	1486616.837	674.32	Anchor



Survey Data of Aug 30, 2023 of the Eagle Pass Buoys

Survey Point	Northing (feet)	Easting (feet)	Elevation (NAVD 88) (feet)	Remarks
3267	13430740.36	1486623.824	673.893	Anchor
3268	13430720.77	1486628.164	673.988	Anchor
3269	13430767.29	1486637.698	673.527	Anchor
3270	13430815.51	1486623.932	673.814	Anchor